



Analyzing Disaster Frame Messaging and Its Impact on Risk Perception Among College Students

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Abstract

Message frames are taken differently by different people so this study aims to analyze the impact of disaster risk frames on the risk responses of third-year BA Communication students' risk responses on four disaster risk frames about the "Big One" The mixed method design was used in the study. A survey questionnaire and a focus group discussion were used in the study. Purposive sampling was used and there were 35 respondents of which 8 were interviewed for the focus group discussion. It was found that there had been a higher positive response with frames highlighting positive tones. On the other hand, there had been negative responses when disaster risk frame messages were started with negative tones. Furthermore, the risk responses of the respondents were anchored on four points: avoidance, mitigation, transfer, and acceptance. However, transfer of responsibility has not been considered as a risk response from this study based on students' responses while acceptance came to those who cared less about disaster risk frames. Family and community preparedness, construction of the message, knowledge learned from Risk, Disaster and Humanitarian Communication Course, imagining possible scenarios, own experiences and feelings, infomercials and statistical data on destruction and casualties, and seeing earthquake as a risk and not about the structure of the frames are the factors affecting the respondents' risk responses including ignoring the question of their choice of risk frames.

Based on the results, it is suggested that in RDH, the presentation of balanced information, integration of visuals, and use of simple language should be considered. Feedback on such practices in the classroom should also be considered. For future research, students of other programs should also be considered for generalized results. Also, intergenerational study is suggested.

Keywords: BA Communication, disaster, frame messaging, disaster frame messaging, risk responses, earthquake, mixed-method study, Philippines

1. Introduction

Words have different impact to different people. In instances wherein communication becomes very important and life-saving at the same time, the more we should value it and make sure that it would be beneficial to all concerned.

Under various fields of research, framing is a concept beautifully constructed by a diverse set of theories and notions. Framing is all about how an individual, a group, an organization, or society communicates and perceives a particular issue. Fields such as Media and communication, Health, Politics, and law saw the advent of applications of framing (Honavar et al., 2020).

The relevance of media for example has highlighted the responses regarding disasters. In a study, Pinoy Ayuda by Alonzo (2014), it was found out that positive framing had positive effects on the millennial's intention to help. The researchers have affirmed the utilization of the agenda-setting theory via the proposition of framing and theory of planned behavior on understanding the socio-psychological philanthropic characteristics of the millennials.

Existing studies on disaster-risk management from the humanistic perspective however have focused on disaster-risk perception as the starting point and ignored the important role of risk communication in shaping individual risk perception and changing behavioral responses (Xue, et al., 2022).

Faced with the threat of multi-hazards, many international organizations and institutions, such as the United Nations International Strategy for Disaster Reduction (UNISDR) and Food and Agriculture Organization of the United Nations (FAO), proposed the establishment of a social system that coexists with risk and emphasized on the importance of improving the resilience of residents to disasters in terms of understanding of disaster risks and pre-disaster preparedness (Fang et al., 2018).

Increasingly, mobile networks, and mobile operators are playing a critical role in facilitating emergency communications, early warning information, and supporting response agencies and disaster-affected communities. Within this context, Smart Communications Inc. has developed its Disaster Preparedness and Response Programme. Smarts activities encompass early warning and decision support tools for government agencies and communities, community and employee training for disaster risk reduction, an extensive response plan including the provision of free communications for affected people, and partnerships with Government agencies, academia, and public sector organizations (GSMA, 2012).

With a country frequented by earthquakes, there is a need to be concerned about how words are framed and taken by the target audience.

The term *frame* has multiple connotations. On an abstract level, it implies the composition of different parts of a message according to a particular design. It can refer to a construction (e.g., frame of a building), to a surrounding or a border (e.g., frame of a picture), to a state of mind (e.g., she is in a happy frame of mind), or to the linguistic composition of a sentence or an utterance (Keren, 2011). What all of these (and related) usages have in common is that they afford a certain structural basis or, in perceptual terminology, determine the *Gestalt* of the message. However, the different perceptions of people on the same message becomes a question of its effectiveness especially if the message is to reduce risk among people.

The researchers take interest in studying the impact of disaster frame messaging among the BA Communication students because the core of their course is in communication. How they interpret messages, especially of public concern would form the basis of their risk communication strategy as future media practitioners.

Specifically, the third-year BA communication students are the target respondents of the study. They are the ones who take the Risk Communication course thereby giving them more opportunity for self-evaluation of interpreting framed messages. They are to look into this by means of an article on the Big One by Joyce Aguila in ANCX (2021). This was chosen because its predictive value for risks is a good subject for the risk responses of the target respondents.

It is expected that at the end of the study, the impact of disaster frame messaging in risk responses of third-year BA Communication Students can be generalized. The result can be integrated into teaching communication/ language courses for a more effective risk communication strategy.

The general problem of the study is the analysis of the impact of the risk responses of third-year BA Communication students to earthquake-framed messages at Bataan Peninsula State University Main Campus during the second semester of the Academic year 2021-2022.

Specifically, the study sought answers to the following questions:

1. How can the risk responses to earthquake-framed messages of third-year BA Communication students of BPSU Main Campus be described in terms of:
 - a. Positive action, positive outcome.
 - b. Negative action, positive outcome.
 - c. Positive action, negative outcome and
 - d. Negative action, negative outcome?
2. What reaction between positive and negative would the BA Communication students likely have on the following framed messages:
 - a. Positive action, positive outcome.
 - b. Negative action, positive outcome.
 - c. Positive action, negative outcome and
 - d. Negative action, negative outcome?
3. What were the factors considered by the respondents on their risk responses?
4. What are the implications of the results of the study on disaster message framing and teaching of risk communication strategies?

Review of Literature and Studies

People perceive risks in different terms, experiences, and associations. One of the items involved in their individual assessment of the risks they face or could face in the near future is represented by media - divergent channels of communication, different styles of writing and thinking of journalists. Framing media impact is not visible only when talking about risks, and hazardous situations, but also within the discussions over the topics present on public agenda, main concerns or worries within a society. (Andrei, 2019).

Framing effects have to do with the way that a given story is packaged and presented to consumers of news. It is strongly impacted by the language that is used to describe given events or ascribed to actors who are identified as critical features of a given story. Language is critical in these presentations because it serves as the cognitive framework in which we understand the world around us and in the case of exposure to news make sense of a given event or story. Thus, in this regard, media plays a very significant role in how we perceive events based on their reporting (Aalai, 2017). For example, disaster risk seems to be correlated, mostly by the people aged 40-45 years old with the major earthquake that took place in 1977 in Romania. They filter all the data received through this memory. Thus, every new piece of data, precaution measure, or warning is analyzed and lived in the light of the major impact of the 1977 natural disaster. People fear the possibility of the earthquake happening again and don't act as rational actors anymore (Andrei, 2019).

In the realm of decision-making, subtle changes in the wording of decision scenarios have been shown to influence choice preferences. A particularly reliable manipulation is the tendency of questions phrased in a manner that underscores the positive or negative aspects of a scenario to promote risk-averse or risk-seeking choices, respectively (Best and Charness, 2015).

Intaractchaiyakit and Teachavorasinskun (2018) investigated the effects of framing on the people's perception of earthquake risk in Chiang Rai, Thailand. There were three frames conveying the same earthquake risk but presented in different terms. These statements were in frequency terms of building damage: 475 severely damaged private buildings in 500 years, a 10% chance of occurrence in 50 years, and one severely damaged private building per year. The objective of this research was to determine whether framing the same earthquake risk in different terms led to different perceptions of the risk by different people, leading to 1. what would be the most effective framing type regarding severely damaged private buildings, 2. which affected people's earthquake risk perception most, and 3. whether experiencing an earthquake disaster would change the risk perception of the residents. The result showed that presenting the risk as "one severely damaged private building per year" was the most commonly selected among the three frames and was statistically significant. This finding clarifies that short time frames influence people's earthquake risk decisions, and agencies can effectively use framing to communicate the earthquake risk to people in seismic regions to

stimulate their earthquake preparedness and to reduce future earthquake risk. However, the earthquake experience does not change the risk perception of the residents.

Amatulli, et al.(2017) investigated the effectiveness of negative versus positive message framing in promoting green products, whereby companies highlight the detrimental versus beneficial environmental consequences of choosing less versus more green options, respectively. Across four experiments, they show that negatively framed messages are more effective than positively framed ones in prompting consumers to engage in pro-environmental behaviors. More importantly, they find that anticipated shame is the emotion responsible for this effect. Furthermore, both environmental concern and the type of product promoted serve as moderators; thus, the mediating role of anticipated shame is attenuated when environmental concern is low and the product is a luxury one.

In another study, Li and Su (2018) conducted a meta-analysis of existing experimental studies on the effects of message framing on public engagement with climate change. They selected 10 studies that used self-reported measures of climate-related attitudes and behaviors, with 26 comparison pairs. They examined how the effects of each climate frame on attitudinal and behavioral outcomes might vary for other message characteristics with the inclusion of source (sourced vs. unsourced) and presentation mode (visual vs. text-only). The results of the study indicated that the message framing has a positive effect on individual's engagement with climate change and its two subcategories-behavioral intentions and support for climate policy. They found out that message frames on public health implications or geographical identity barely influence individuals' engagement with this issue.

From Marti, et al.'s (2017) study, it was found out that specific interactions of mood, perceived risk, and frame type significantly affect homeowners' attitudes toward general precautionary measures for earthquakes. The interdependencies of the variable's mood, risk information, and frame type were tested in an experimental $2 \times 2 \times 2$ design ($N = 156$). Only in combination and not on their own, do these variables effectively influence attitudes toward general precautionary measures for earthquakes. The control variables gender, "trait anxiety" index, and alteration of perceived risk adjust the effect. Overall, the group with the strongest attitudes toward general precautionary actions for earthquakes are homeowners with induced negative moods who process high-risk information and gain-framed messages. However, the conditions comprising induced negative mood, low-risk information, and loss-frame and

induced positive mood, low-risk information, and gain-framed messages both also significantly influence homeowners' attitudes toward general precautionary measures for earthquakes. These results mostly confirm previous findings in the field of health communication. For practitioners, their study emphasizes that carefully compiled communication measures are a powerful means to encourage precautionary attitudes among homeowners, especially for those with an elevated perceived risk.

McClure and Sibley's (2011) study on the effect of the negative and positive framing of messages on disaster preparation disclosed another thing. The 200 participants living in Wellington, New Zealand's central business district were asked to answer the pamphlet adapted from McClure et al's study (2009). The pamphlet contained positive or negative outcome framing and positive or negative behavior framing. It also contained examples of actions that people could perform in response to an earthquake. The respondents were asked to rate the "importance of preparing" and the "likelihood of preparing" using a 7-point Likert scale. Based on the results of the study, McClure and Sibley (2011) concluded that the positive and negative framing of messages about a risk influences people's intentions to adopt precautions. They found out that the judgments of the general importance of preparedness were affected by outcome frames, and that the Intentions to take specific actions were enhanced by the negative framing of both the outcome and the specific action. The results of the study emphasized the need to take into account of the distinction between outcome framing and action framing when designing research on framing to clarify which part of the message is shaping responses.

In the study of Bosone & Martinez (2017), they untangled the effect of loss-framing versus gain and non-gain; explaining when, how, and why it influences individuals' intentions to engage in cholesterol screening. They argue that framing effects are (1) significant only when individuals perceive the issue to be highly relevant and (2) are mediated by perceived negative consequences (resulting from undergoing the test) and response efficacy. In a 2(issue-relevance: high vs low) \times 3(framing: gain vs non-gain vs loss) experiment, 229 participants received a message and answered a questionnaire measuring personal relevance, perceived negative consequences, response efficacy, and intention. Results validated a mediation model, explaining that loss-framing is more persuasive than non-gain, which is more persuasive than gain-framing, partly because of their effect on individuals' perceptions of response efficacy.

Otterbring, Festila, and Folwarczny (2021) conducted a study on the impact of message framing and egoistic motivation on narcissists' compliance with preventive health behaviors during COVID-19. This study investigated whether narcissism levels and message-framing strategies affect an individual's willingness to accept personal restrictions and, consequently, comply with a set of preventive health behaviors. Over 85% of the participants from Europe who were prescreened for English language proficiency were randomly assigned to either a positive framing condition, which highlighted possible gains from a program aimed at combating a disease (people that can be saved), or a negative framing condition, which highlighted possible losses (people that can die), with the information provided being objectively identical across conditions (cf. Tversky & Kahneman, 1981). The results of the study revealed that people high (vs. low) in grandiose narcissism are less likely to accept personal restrictions and comply with preventive health behaviors, with negative (vs. positive) message framing constituting a more effective strategy for convincing such individuals to comply with said restrictions and behaviors. The findings suggest that individuals who remain uncooperative during pandemics could be more effectively addressed with adapted message-framing strategies and incentives tailor-made for their distinct personalities.

Hameleers (2021) noted quite different findings from surveys in the US and the Netherlands (N = 1,121). The study demonstrated that gain frames of the coronavirus promote support for risk-averse interventions, whereas loss frames result in relatively more support for risk-seeking alternatives. Loss frames elicit stronger negative emotions, such as frustration and powerlessness. The experience of powerlessness, in turn, mediates the effects of loss versus gain frames on support for stricter interventions. Together, these findings indicate that framing the pandemic in terms of gains may be most effective in promoting support for risk-averse treatments of the pandemic.

In Cantiva et al.'s study (2021), the role of message framing was tested for effective communication of self-care behaviors in the context of the COVID-19 pandemic, contrasting health and economic-focused messages. The messages were presented to 319 participants with an unforced choice task where they had to select the message that they believed was more effective in increasing intentions toward self-care behaviors, motivating self-care behaviors in others, increasing perceived risk, and enhancing perceived message strength. Results showed that gain-frame health messages increased intention to adopt self-care behaviors and were

judged to be stronger. Loss-framed health messages increased risk perception. When judging effectiveness for others, participants believed other people would be more sensitive to messages with an economic focus.

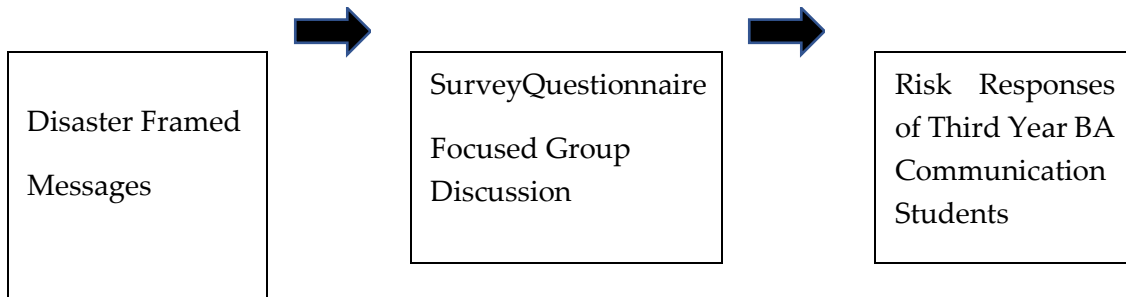
To continue with the Covid-19 pandemic studies, Ogbodo et al.' (2020) study examined the global media framing of coronavirus disease 2019(COVID-19) to understand the dominant frames and how the choice of words compares in the media. Periods of health crisis such as the outbreak of coronavirus pandemic added to the enormous burden of the media in keeping people constantly informed. Extant literature suggests that when a message is released through the media, what matters most is not what is said but how it is said. As such, the media could either mitigate or accentuate the crisis depending on the major frames adopted for the coverage. It was concluded that global media coverage of COVID-19 was high, but the framing lacks coherence and sufficient self-efficacy and this can be associated with the media's obsession with breaking news. The preponderance of these frames not only shapes public perception and attitudes towards the pandemic but also risks causing more problems for those with existing health conditions due to fear or panic attacks.

These studies had different results because disaster studies held that human perception, knowledge, and values can contribute to disaster preparedness and that they are fundamental in increasing community disaster resilience. The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015–2030 even highlighted the importance of communicating risk in encouraging disaster preparedness for effective response (Rahman & Munadi, 2018) which in the light of this study is referring to the framing of messages.

The latter is important because our choices are influenced by the way options are framed through different wordings, reference points, and emphasis. The most common framing draws attention to either the positive gain or negative loss associated with an option (The Decision Lab, 2021) and since framing covers a wide ground where its effects to several audiences need to be further studied especially on the school setting. the researchers chose the third-year BA Communication students to be the subjects of the study as their responses can be a key to self-evaluation of how they perceive disasters. The outcome can be of value to their practice in media in the future.

Conceptual Framework

For the present study, the following conceptual framework was used.



Four disaster-framed messages about the “Big One” were presented to third-year BA Communication students for analysis of their risk responses. The survey questionnaire and focus group discussion were the instruments used in the study to arrive at the risk responses of third-year BA Communication students.

2. Methodology

The study used a mixed methods research design. Mixed methods systematically integrate quantitative and qualitative approaches to research in order to answer research questions. Quantitative researchers follow a postpositivist worldview and are predominantly interested in collecting and analyzing numerical data with structured methods. Qualitative researchers follow a more constructivist worldview and are predominantly interested in collecting and analyzing narrative data using open-ended (holistic) procedures. Mixed-methods researchers are pragmatic, collect both narrative and numerical data, employ both structured and emergent designs, analyze their data both via statistical and content analysis, and make meta-inferences as answers to their research questions by integrating the inferences gleaned from their qualitative and quantitative findings (Newman & Tashakkori, 2010).

A validated modified survey questionnaire based on earthquake risk frames from McClure and Sibley’s (2011) was used in the study. The study retained McClure’s action and outcome framing with modified statements under them indicating hypothetical preparedness or unpreparedness for the “Big One” with greater or lesser chances of surviving or with greater or lesser risks. The modified statements are:

- a. Positive action, positive outcome. If you are prepared for the “Big One,” you have a greater chance of surviving the event.
- b. Negative action, positive outcome. If you are unprepared for the “Big One,” you have a lesser chance of surviving the event.
- c. Positive action, negative outcome. If you are prepared for the “Big One,” you

have a lesser chance of risk in the event.

d. Negative action, negative outcome. If you are unprepared for the "Big One," you have a greater chance of risk in the event.

The above statements were part of the context of the following statements from the article "How strong an earthquake will the "Big One" be? written by Joyce Reyes-Aguila | May 02 2019 but further modified following McClure's brief action and outcome framing:

a. The Geologic Disaster Awareness and Preparedness Division of DOST-PHIVOLCS reminded the public that being prepared with emergency kits and supplies when a strong earthquake occurs would entail higher chances for an individual to protect oneself. (positive-positive)

b. The Geologic Disaster Awareness and Preparedness Division of DOST-PHIVOLCS reminded the public that being prepared with emergency kits and supplies when a strong earthquake occurs would entail lower chances for an individual to be injured. (positive-negative)

c. The Geologic Disaster Awareness and Preparedness Division of DOST-PHIVOLCS reminded the public that being unprepared when a strong earthquake occurs would entail lower chances for an individual to protect oneself. (negative-positive)

d. The Geologic Disaster Awareness and Preparedness Division of DOST-PHIVOLCS reminded the public that being unprepared when a strong earthquake occurs would entail higher chances for an individual to be injured. (negative-negative)

Purposive sampling was used to choose the target respondents to answer the survey questionnaire. It is a non-probability sampling technique where the researcher relies on his discretion to choose variables for the sample population. Here, the entire sampling process depends on the researcher's judgment and knowledge of the context (Formplus, 2022). This sampling enables researchers to squeeze a lot of information out of the data that they have collected. This allows researchers to describe the major impact their findings have on the population (Alchemer, 2021).

Third-year BA Communication students from Bataan Peninsula State University at Main Campus are the respondents of the study because of their association with the Communication

field and because of having undergone study of the Risk Communication course. Thirty-five of them gave their consent to be the respondents of the study .

Two methods were utilized in the mixed-method design. The survey questionnaire was part of the quantitative part of the study while the focus group discussion (FGD) was used for the qualitative part of the study. The focus group discussion is facilitated using a semi-structured interview guide to foster active participation and in-depth discussion. The semi-structured nature of the discussion intends to probe specific, predetermined topics while allowing flexibility and stimulating participants to share and discuss among each other. The FGD aims to gain insights into people's motivations and social practices, as well as how they view or perceive their experiences, communities, and other aspects of life. Like all qualitative methods, FGDs use open-ended questions to collect qualitative data i.e., words and narrative explanations (Dzino-Silajdzic,2018).

Results in the survey questionnaire as part of the quantitative part of the study were illustrated through bar graphs showing related frequencies. On the other hand, the eight respondents' answers in the focus group discussion were subjected to content analysis.

The study mainly focused on the risk responses of third year BA Communication students to disaster risk frame messaging in particular about the hypothetical "Big One" scenario.

For understanding of the study, risk responses have been defined operationally as respondents having positive and negative perception about a disaster risk frame and manifesting reactions like avoidance, mitigation, transfer, and acceptance regarding an impending earthquake.

The study sought answers to the following research problems:

1. Risk Frame Preference of Third Year BA Communication Students

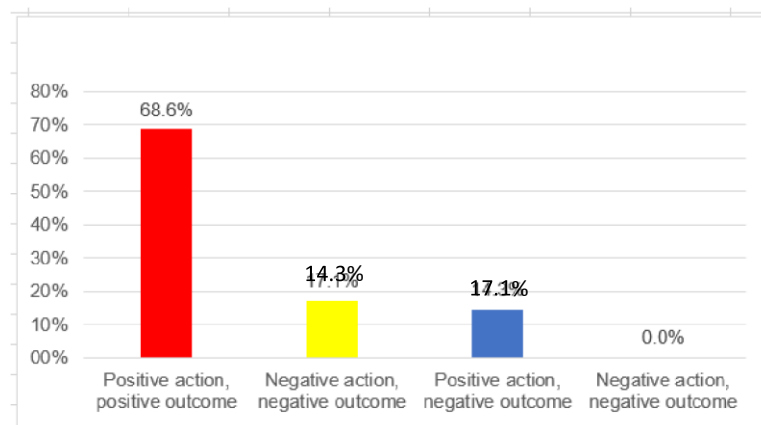


Figure 1. Risk Frame Reference of Third Year BA Communication Students

The bar graph presents the Risk Frame Preference of Third Year BA Communication Students. The positive action and positive outcome with the statement “If you are prepared for the “Big One,” have a greater chance of surviving the event” has the greatest impact with 68.6%. This is followed by the positive action and negative outcome statement with 17.1%. Both results emphasized that the respondents were affected mostly by the beginning positive statement regardless of positive or negative outcomes. This finding is the opposite of McClure and Sibley’s (2011) study whereby they found out that judgments of the general importance of preparedness were affected by outcome frames but not action frames; these judgments were higher with negatively framed outcomes than positive outcomes. Intentions to take specific actions were enhanced by the negative framing of both the outcome and the specific action. However, in Marti et al.’s study (2017) on Communicating Earthquake Preparedness: The Influence of Induced Mood, Perceived Risk, and Gain or Loss Frames on Homeowners’ Attitudes Toward General Precautionary Measures for Earthquakes, overall, the group with the strongest attitudes toward general precautionary actions for earthquakes are homeowners with induced negative mood who process high-risk information and gain-framed messages. These findings clarify which framing messages are most likely to increase preventive actions in relation to risks. With such contrastive findings and interest in the future endeavors of BA Communication students as risk communicators, there is a need to have conclusive findings about their specific risk responses.

2. Perception of Third Year BA Communication Students on the Four Disaster Risk Framed Messages

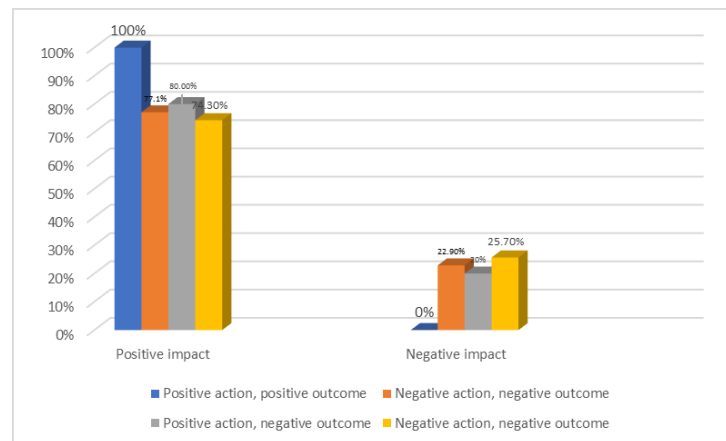


Figure 2: Perception of Third Year of the BA Communication students on the Four Disaster Risk Framed Messages

Figure 2 presents the reaction of the respondents on the positive and the negative impact of a particular research frame. With positive action and positive outcome risk frame, there was a 100% positive reaction. This could have stemmed from people wanting to be warned about disasters by making them calm and collected by telling them that with being prepared for a disaster can save one's life. It's human nature to choose what is a gain rather than what would be a loss (BoyceWire,2022).

With the negative action and negative outcome, 74.3% reacted to it negatively. This result might be because of people not want to hear any negative thing from anyone which obviously is common sense - that if one is unprepared for the "Big One," there is a lesser chance of surviving it. This is in contrast of Intaractchaiyakit and Teachavorasinskun's (2018) study on the effects of framing on the people's perception of earthquake risk in Chiang Rai, Thailand. With that study, the result showed that presenting the risk as "one severely damaged private building per year" was the most commonly selected among the three frames and was statistically significant. The difference on the outcomes of the studies may have been with the BA Communication students not imagining it would happen in the near future.

With the positive action and negative outcome, 80% showed a positive reaction to this kind of risk frame. This risk frame started off with a positive scenario of being prepared and ending up with a lesser chance of risk in the event. Even with a negative outcome, the risk

frame still highlights a positive tone to it. It seems when the positive statement is highlighted, the more positive reaction there is to this kind of risk frame. It is viewed to be more of gaining rather than losing something.

With the negative action, negative outcome, 74.3% reacted to it negatively perhaps because of the unsettling feeling of being unprepared and at the same time having a greater risk in the event the “Big One” occurs. This is the opposite of McClure et al.’s (2011) study that has found out that intentions to undertake both general and specific preparations in an earthquake were higher with negative actions and negative outcomes. This is not true for all when some would feel a great loss and are not in control of the situation. Always, there is a need to seek out positivity (Boycewire, 2022).

In summary, the first impact of the four disaster risk frames on the risk responses of the respondents implied that there had been positive responses with frames highlighting positive tones. On the other hand, there have been negative reactions when disaster risk frame messages are started with negative tones.

3. Factors Influencing Respondents’ Risk Responses on Disaster Risk Frames

How the respondents reacted positively or negatively to a particular disaster risk frame may have stemmed from some influential factors revealed by the respondents’ answers to the questionnaire and through a focus group discussion with 8 third-year BA Communication students who are also part of the respondents’ group.

The following were found:

Eight respondents admitted that stressing on the importance of community and family preparedness in the earthquake is a big deal towards safety. The positive tone of readiness gives security and a sense of surviving the event that led to the choosing of the positive action, positive outcome risk frame.

Witvorapong et al. (2015) pointed out that people who pay close attention to disaster-related news, prepare emergency kits, or make family emergency plans and are willing to relocate are less negatively affected.

On the other hand, the construction of the message for seven respondents was the key to choosing a particular risk frame. It was noticed that the article in focus began with so many negative things to happen in case the “Big One” strikes. It is so much about casualties, its details, economic loss, and the magnitude of destruction. It was received with negative action with a negative outcome risk frame. However, presenting the information that served as news and became like matter of fact made the respondents take these things seriously making them choose the positive action, positive outcome risk frame. Moreover, the four risk frames according to them were just fine and were taken at face value.

The above findings have found grounds in research that have repeatedly demonstrated that people systematically express different preferences based on the same scenarios depending on how the options or outcomes are described linguistically (Kahneman, 2003).

Imagining possible scenarios during the earthquake had become the basis of five of the respondents on their choice of a risk frame and from there take the necessary action to overcome the situation. There's the belief that one can still do something about the situation so these respondents chose the positive action, positive outcome risk frame.

According to Ayton, Pott, & Elwakili, (2007) and Wilson & Gilbert (2003) for the human species, imagining a potential future might be crucial for survival because it serves various functions. By previewing upcoming positive or negative events and their potential consequences, individuals are able to pre-feel the impact such situations might have on their lives and consider preparing for future events accordingly. This now creates confidence about preparedness on the part of the respondents.

Amos Tversky and Daniel Kahneman, two expert psychologists in decision-making, put forth an interesting theory some years ago: They called it prospect theory and it suggests that framing matters. In fact, even small changes in wording have a substantial effect on our propensity to take risks. According to prospect theory, framing matters a great deal, and if we frame a situation in terms of a potential gain, we act differently than if we frame it in terms of a potential loss. This notion of loss versus gain turns out to have a great impact on our risk-seeking or risk aversion (Roberto, 2016).

Four of the respondents, however, relied on their own experiences and feelings to decide on particular risk frames. Terms like shocked with the numbers, fixated on the negative side of the article, and insufficient public preparation bore negative impressions and these led to the choice of negative action, negative outcome risk of frame but knowledge in Risk, Disaster & Humanitarian Communication about balanced information like identifying the threat and minimizing casualties led to positive action, positive outcome risk frame.

Many theorists have proposed that emotions serve an adaptive coordination role, triggering a set of responses (physiological, behavioral, experiential, and communication) that enable individuals to address encountered problems or opportunities quickly (for review, see Keltner et al. 2014). According to The Decision Lab (2023), our choices are influenced by the way options are framed through different wordings, reference points, and emphasis. The most common framing draws attention to either the positive gain or negative loss associated with an option.

Generally, positive framing will spur people into action and encourage possible risk-taking whereas negative framing will lead people to inaction or cessation of something. Framing information negatively (loss-framed messaging) is widely used to try and scare people into better behavior or into not doing something (Convertize, n.d.) However, recent studies done by O'Keefe & Jensen (2008) have shown that we actually react better to positive framing. Positive framing can lead to happier thoughts, more motivated actions, and greater synergy with the message provider.

With the two of the respondents of this study, the factor that has affected them in choosing a risk frame is the fear of the gravity of destruction that the "Big One" would cause which would have a negative impact on their families and relatives so the negative action, negative outcome risk frame was chosen.

Disasters often cause other types of losses beyond the death of loved ones, thus leading to more generalized states of dysphoria and depression. Disasters create long-term stressors that can instigate acute distress and anxiety and extract a general toll on the quality of everyday health and well-being. Although the stakes are often higher with disasters, the same basic patterns of distribution of dysfunction and resilience have been observed. In short,

although many people are psychologically harmed by disasters, a great many people also manage to endure their consequences with minimal psychological cost.

Telescoping out further, disasters often impact broader domains that go well beyond the individual. Disasters affect the nature and structure of families. They impact the communities in which they take place, taxing their institutions and sometimes challenging their survival (Bonnano et al., 2010). The results may be long-term or temporary.

One respondent mentioned that the infomercials become a big help in giving advisories on the things to do during an earthquake. The awareness it provides to the public leads to positive action and positive outcome which is also a risk frame structure.

Media power is undeniable. According to Seo et al.'s (2012) study, research examining media use and disasters mostly focuses on media as a main information channel. Media messages can inform the public about necessary actions needed to reduce harm with the goal of increasing audience efficacy (Reynolds & Seeger, 2005). **Social media can be used as a tool by providing information and instructions, with real-time alerts and warnings. Social media represents one more channel for emergency services to send an alert and warning. (Wendling et al., 2013).** With that, its use should be maximized especially in educating people about disaster preparation.

Another respondent based his chosen risk frame on the statistical data that calculates the destruction the earthquake would cause when it strikes. It had a negative impact because of the negative mind conditioning that when left unaddressed, bad things will happen. This leads the respondent to the choice of negative action, negative outcome risk frame.

A big number of casualties is alarming in itself and it is with this perception that nothing was done to prevent it or no one can prevent it from happening so negative framing would be most effective for some people to avoid this from happening. Negative framing focuses on losing something where we talk about the fear of loss or fear of missing out. It's also more prevention-oriented, highlighting things such as stopping problems before they occur.

The negatively-framed message emphasizes the risks, threats, dangers as well as urgency.

and when you don't solve this problem immediately, it will lead to dire consequences (Nicole, 2018) for some people, this is an effective way of sending the message.

A respondent however chose on the basis of the risk of an earthquake. The risk frames according to the respondent all lead down to harboring fear and would lead anyone to action. Based on the respondent's answer, the risk frames seem to have equal value but still, there was his preference for positive action, negative outcome frame.

This result is seen in McClure and Sibley's (2011) study where it was found out that intentions to undertake both general and specific preparation were higher with negatively framed outcomes than positive outcomes. With specific actions, negative outcomes led to higher intentions to prepare when the action frame was positive (i.e., being well prepared). This might be because people are motivated to action when the risks are high.

Five respondents of this study opted to skip the question on the factors affecting their chosen risk frame. It might be that they don't believe it wouldn't happen at all so there's no need to think about how the message about the risk is going to be framed.

Can we encourage people to prepare for a natural disaster by altering the way that scientific information about risk is presented? In assessing the risk posed by a particular hazard, people tend to be guided more strongly by their emotional reactions than by logical or statistical analysis; human beings are driven to protect themselves from risks that they have actually experienced, that are easy to envision, or that are linked to vivid, concrete images. Thus, even if people recognize that earthquakes pose an important threat, they may be unmotivated to take action to prepare for this abstract risk in the absence of direct personal experience. Perhaps educating them some more can help them open their eyes that this is something not to be ignored at all.

Having identified the factors that caused the respondents to choose a particular risk frame brings us back to the impact of the disaster risk frame on the risk responses of third-year BA Communication students.

The impact of the risk frames on the risk responses of the respondents can be positive or negative but in a deeper sense can be categorized as avoidance, mitigation, transfer, and acceptance.

The reason behind any positive or negative risk response is any of these- the desire to do something to eliminate the cause of the threat also known as avoidance; to do something to reduce the probability/impact of risk which is mitigation; to take action to make another party responsible for the risk which is transfer and to plan but act only when the risk happens also known as acceptance.

From among the answers of the respondents, positive framing and positive response highlighting preparedness in the event of an earthquake is reflecting avoidance of the threat. Self-preservation is a human instinct and in the event of a disaster, survival is the name of the game.

Identifying threat, receiving information , imagining possible scenarios, being aware of infomercials manifest positive framing and positive response from the respondents because in all these, there is the desire to mitigate the risk of destruction and losses caused by the earthquake.

Casualties, destruction, figures reflecting the magnitude of destruction and losses of properties, families, and relatives, and insufficient preparation of the public regarding this disaster bore negative framing and negative response from the respondents because, from all these, a negative framing may only make a little difference in the destruction it may create. Making people realize about avoidance, mitigation , transfer and acceptance might be a struggle when in the risk frame, there's already a negative tone to it.

Relying on one's own feelings and experiences leans towards negative framing but with a positive response because, despite the fear of an earthquake, there is the desire to avoid it and its impact.

Knowledge in Risk, Disaster & Humanitarian Communication about balanced information like identifying the threat and minimizing casualties, acceptance of the risk of earthquake no matter how it is presented in risk frames illustrated positive framing and

positive response from the respondents all because there is the desire to avoid and to mitigate the risk of the earthquake.

For those who ignored to respond positively or negatively to a risk frame might not have considered words to be important at all in response to an earthquake disaster. It may just be that the choice is acceptance-waiting things to just happen and planning on the spot.

Overall, the risk responses of the respondents were anchored on four points: avoidance, mitigation, transfer, and acceptance. Avoidance and mitigation come hand in hand for the risk responses of the respondents while transfer of responsibility has not been considered as a risk response from this study based on students' responses. Acceptance to the risk, however, came to those who cared less about disaster risk frames.

4. Implications of Disaster Message Framing and Teaching of Risk Communication Strategies

People have their own preferences of what they would want to hear and since there is a premium put on the use of words to communicate meaningful statements to make a difference in people's lives, the results of this study for BA Communication students to apply in their field is offered.

From the study, it is made clear that positive framing is much preferred than negative framing. The outcomes may be the same but how it is said still matters. Also, consideration is to be given to the impact on the risk responses and whether we are bringing forth good results and really making people be saved from disasters by studying the psyche of possible actions like avoidance, mitigation, transfer, and acceptance and continuing to learn and relearn as things around us continue to change.

As to teaching Risk Communication Strategies, the respondents affected by imbalanced information, lack of visuals, and use of language can be taught how to handle information and throw it to the public to digest and understand and to add visuals in consideration of the psychology of the readers or viewers in any media platform fit to use.

The use of simple and straightforward language should be encouraged. Further, when risk framing is concerned, it must be translatable to positive action to always serve its purpose. A statement therefore must be treated as a game changer as far as survival is concerned and must be handled with care. There must be practice and feedback involved in getting real-time reactions even inside the classroom better if it can be practiced outside and the results studied and restudied for improvement or enhancement of the teaching strategies in Risk Communication Strategy.

3. Conclusion

Framing presents ideas that influence one's decision-making. This is done through the presentation of the same thing in different ways. McClure and Sibley for example has come up with four frames for actions and outcomes to represent positive and negative framing which has also been used by this study. To wit: positive action, positive outcome; positive action, negative outcome; negative action, positive outcome and negative action, negative outcome. These frames are in the light of the earthquake risk frame about the one dreaded to happen the "Big One" which is predicted to hit Manila in the future.

Thirty-five BA Communication students were subjected to answering a survey questionnaire and eight them to a focused group discussion in which the following were found:

1. There was a general preference for positive action and positive outcome frames but how each responded positively and negatively to each frame almost showed the same results. With risk frames starting with positive tones, there was a positive response no matter what the outcomes were and with negative risk frames, there was a negative response because of highlighting the negative ;

2. The factors that influenced the respondents to choose a specific risk frame were: article hinting at preparedness in this disaster; construction of the message highlighting the positive or the negative; imagination; own feelings and experiences; fear of destruction; number of deaths; infomercials and impact on their families and relatives.

The factors mentioned were in relation to the impact of the disaster risk frames third-year BA Communication students measured in two ways: positive and negative responses to the risk frames within four categories- avoidance, mitigation, transfer and acceptance and

3. The respondents believe that they could contribute in the development of an effective risk communication strategy by using balanced information, using infographics with consideration of the target audience as well as with the use of simple and understandable language. The same were requested to be considered in improving instruction in Risk Disaster Communication.

4. Recommendations

The following recommendations are hereby given concerning the study:

1. The results of this study can be incorporated into next year's syllabus and even modules can be made for this purpose. Feedback though must be part of the process to ensure that additional important skills for future communicators are in place;
2. Experiments on risk framing on different media platforms should also be considered to discover the best way to influence people to avoid and mitigate risk ;
3. BA Communication students should be taught not only to read, write risk frames but also, should know how to listen to silence and deal with people from different walks of life ;
4. Intergeneration responses to disaster risk frames may be considered and
5. For future research, students from other programs of study as respondents may be considered for more generalizable results.

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